

REMARKS

Claims 51 and 55 are amended. Claims 51-58 are pending in the application.

Claims 51-57 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Tseng, U.S. Patent No. 5,830,802. The Examiner is reminded by direction to MPEP § 2131 that anticipation requires each and every element of a claim to be disclosed in a single prior art reference. Claims 51-57 are allowable over Tseng for at least the reason that Tseng fails to disclose each and every limitation in any of those claims.

Referring initially to independent claim 51, as amended such recites transferring fluorine from a fluorine-containing layer into a polycrystalline thin film transistor layer where the transferred fluorine passivates the polycrystalline thin film transistor layer and incorporating the passivated layer into a transistor construction. The amendment to claim 51 is supported by the specification at, for example, page 12, lines 20-24; and page 13, lines 1-13 and 23-24.. Tseng discloses formation of a dielectric layer 58 over a refractory silicide layer 56 and out diffusing halogen from the silicide layer into overlying dielectric layer 58 which is subsequently removed to prevent halogen diffusion into underlying gate layers (Fig. 2 and col. 3, ll. 11-20, 30-32 and 56-60). Tseng does not disclose the claim 51 recited transferring fluorine into a polycrystalline thin film layer to passivate the polycrystalline thin film layer in a bottom-gated thin film transistor construction. Accordingly, independent claim 51 is not anticipated by Tseng and is allowable over this reference.

Dependent claims 52-54 are allowable over Tseng for at least the reason that they depend from allowable base claim 51.

As amended, independent claim 55 recites retaining fluorine within a polycrystalline thin film transistor layer and incorporating the thin film transistor layer in a bottom-gated

thin film transistor construction. Claim 55 additionally recites forming a polycrystalline thin film transistor layer over a transistor gate, forming a fluorine-containing layer over the polycrystalline thin film transistor layer and providing a buffering layer intermediate the thin film transistor layer and the fluorine-containing layer. As set forth in applicant's previous response, Tseng discloses providing a dielectric layer 58 over a refractory metal silicide layer 56 as shown in Fig. 2. Tseng further discloses that fluorine is diffused from the silicide layer 56 into overlying dielectric layer 58 (col. 3, ll. 30-33). The Examiner indicates at page 5 of the present Action that this argument does not address why the silicon dioxide layer taught by Tseng fails to anticipate the recites buffering layer. Applicant notes that even if dielectric layer 58 disclosed by Tseng could qualify as a buffering layer, because this layer is not disposed between a fluorine-containing layer and a polycrystalline thin film transistor layer it cannot anticipate the buffering layer of claim 55 which is clearly recited as being between a polycrystalline thin film transistor layer and a fluorine-containing layer. Accordingly, claim 55 is not anticipated by Tseng.

The Examiner further indicates at page 5 of the present Action that applicant's claim language does not require the fluorine layer to be overlying the polycrystalline layer. Directing attention to the language of claim 55, such clearly indicates the fluorine-containing layer being over the polycrystalline thin film transistor layer. Accordingly, applicant's claim language does require the fluorine layer to be over the polycrystalline thin film layer. In contrast, Tseng discloses diffusing fluorine from underlying metal silicide layer into an over lying dielectric layer 58. Therefore, the claim 55 recited element of transferring fluorine from a fluorine-containing layer into an underlying polycrystalline thin film transistor layer is not anticipated by Tseng.

The Examiner additionally indicates at page 5 of the present Action that applicant's claim language does not specifically require fluorine to remain within the polycrystalline film. Without admission as to the propriety of the Examiner's statement, claim 55 is amended to specifically recite retaining fluorine within the polycrystalline thin film transistor layer. Accordingly, claim 55 is not anticipated by Tseng for at least the reason that Tseng does not disclose retaining fluorine within a polycrystalline thin film layer in a bottom-gated transistor, does not disclose providing a buffering layer intermediate a thin film transistor layer in a fluorine-containing layer, and does not disclose transferring fluorine from the fluorine-containing layer into an underlying polycrystalline thin film layer.

Dependent claims 56-57 are allowable over Tseng for at least the reason that they depend from allowable base claim 55.

Applicant acknowledges the Examiner's indicated allowability of the subject matter of claim 58. Dependent claim 58 is allowable in dependent form as presented for at least the reason that it depends from allowable base claim 55.

For the reasons discussed above, pending claims 51-58 are allowable. Accordingly, applicant respectfully requests formal allowance of such pending claims in the Examiner's next action.

Respectfully submitted,

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